Olga V. Kalashnikova, PhD

Member of Technical Staff
Jet Propulsion Laboratory
4800 Oak Grove Drive • Ms 180-401
Pasadena, CA 91109
(818) 393-0469

RELEVANT EXPERIENCE

Olga Kalashnikova is a JPL aerosol scientist on MISR team. She has a working knowledge of mineral dust optical properties analysis and a working experience with MISR and many other NASA satellite data sets. She has 4 years of experience in development mineral dust aerosol models for remote sensing applications (CU-Boulder and NRC Postdoc at JPL) and over 5 years of experience in studying mineral dust properties by combining satellite data for climate analysis (JPL scientist).

EDUCATION:

Ph.D., Atmospheric Science, University of Colorado at Boulder, 2002
Remote Sensing Certificate, University of Colorado at Boulder, 2001
M.S., Physics, University of Colorado at Boulder, 1997
M.S., Physics, Kazakh State National University, Kazakhstan, 1994
B.S., Physics, Kazakh State National University, Kazakhstan, 1993

PROFESSIONAL EXPERIENCE:

CURRENT POSITIONS:

2004–present: Scientist, Atmospheric Remote Sensing Science Section 328, JPL

PREVIOUS POSITIONS:

2002–2004: NRC Research Associate (post-doctorial), JPL
1997–2002: Research Assistant, University of Colorado at Boulder

PROFESSIONAL ACTIVITIES: Member, AGU, SPIE, AMS
Student advisor at JPL, 2008-present
Reviewer, NASA panels, 2008-present

SELECTED AWARDS

- JPL Mariner Award (In recognition of extensive collaborations with the atmospheric science community in analyzing and studying MISR aerosol data), August, 2009
- MISR Science and Data System Team Award, July, 2009
- NASA Supplemental Educational Award (PI), 2009-2011
- NASA New Investigator in Earth Science Award, 2008
- Zeldovich International Award 2006 for COSPAR Commission A "Space Studies of the Earth's Surface, Meteorology and Climate", 2006
- National Research Council (NRC) fellowship, NASA/JPL, 2002

REFEREED PUBLICATIONS

Selected Journal Articles

Kalashnikova O.V., Sokolik I.N., Garay M., and Wu D. (2010), A 10-year climatology of Asian dust derived from MISR aerosol products, JGR, submitted

Kalashnikova O.V., Garay M., and S. Kassabian (2010), MISR plume height climatology over Bodele dust source, Remote Sensing of Environment, in preparation

Hansell R. A., 3, J. S. Reid, S.C. Tsay, T.L. Roush, O. V. Kalashnikova (2010), A Sensitivity Study on the Effects of Particle Chemistry, Asphericity and Size on the Mass Extinction Efficiency of Mineral Dust in the Terrestrial Atmosphere: From the Near to Thermal IR, Journal of Atmospheric Chemistry and Physics, in review

Kishcha, P., B. Starobinets, O. Kalashnikova, and P. Alpert (2010), The Effect of Urbanization on AOT and Solar Dimming over the Indian Subcontinent based on Satellite Data, Journal of Remote Sensing, accepted.

Kishcha, P., B. Starobinets, O. Kalashnikova, C.N. Long, and P. Alpert (2009), Variations of Meridional Aerosol Distribution and Solar Dimming, J. Geophys. Res., doi:10.1029/2008JD010975

Kalashnikova O. V. and R. A. Kahn (2008), Mineral dust plume evolution over the Atlantic from MISR and MODIS aerosol retrievals, J. Geophys. Res., 113, D24204, doi:10.1029/2008JD010083

Kalashnikova O.V , F. P.Mills, A. Eldering, D. Anderson (2006), Application of satellite and ground-based data to investigate the UV radiative effects of Australian aerosols, Remote Sensing of Environment, 107, 65-80

Kalashnikova, O. V. and R. Kahn (2006), Ability of multiangle remote sensing observations to identify and distinguish mineral dust types: Sensitivity over dark water, J. Geophys. Res., 111, D11207, doi:10.1029/2005JD006756.

Kalashnikova O. V., R. Kahn, I.N. Sokolik and W.-H Li (2005), The ability of multi-angle remote sensing observations to identify and distinguish mineral dust types: Optical models and retrievals of optically thick plumes, JGR, VOL. 110, D18S14, doi:10.1029/2004JD004550

Kalashnikova O. V. and I. N. Sokolik (2004), Modeling the radiative properties of nonspherical soil-derived mineral aerosols, JQSRT, Vol 87/2. pp 137-166

Kalashnikova O. V. and I. N. Sokolik (2002), Importance of shapes and compositions of wind-blown dust particles for remote sensing at solar wavelengths, GRL, 29, N. 10, 10.1029/2002GL014947

Selected Refereed Papers

Kalashnikova O. V., N. C. Hsu, R. Kahn, Capabilities & limitations of space-borne passive remote sensing of dust, proceeding of the 3d international dust workshop, Leipzig, September 2008.

Kalashnikova O.V., D. J. Diner, R. Kahn and B. Gaitley, Dust Aerosol Retrieval Results from MISR, Proceedings of the SPIE International Asia-Pacific Symposium Remote Sensing of the Atmosphere, Environment, and Space, Honolulu, Hawaii, November 2004.

Kalashnikova O.V. and I. N. Sokolik, Modeling the scattering phase function of mineral dust for remote sensing applications, Proceedings of the 6th Conference on Electromagnetic and Light Scattering by Nonspherical particles, Gainesville, Florida; March 2002